REIVENTING THE FUTURE

The Role of Science and Technology in Growth and the Rural Sector

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ABSTRACT[1]

The aim of the paper is to outline strategic options for applying science and technology to economic growth and agricultural development in Latin America in light of globalization and sustainability challenges. Global trends in the generation and use of knowledge are increasingly being associated with the integration of knowledge systems around the world as well as the convergence of different disciplines around specific application. Agricultural research and development (R&D) is becoming a global endeavor involving players from around the world. In addition, new applications in agriculture now involve knowledge drawn from a wider range of disciplines and fields such as information technology, genomics, ecology and the social sciences.

Globalization is intricately tied to trends in technological innovation in at least two important aspects. First, it is the expression of the results of scientific and technical research in the market place. In this regard, technological innovation is the engine that drives the capacity of nations to meet basic human needs, strengthen their global competitiveness, and make the transition towards sustainability. Secondly, advances in information technology have contributed to greater integration of countries through communication.

The pace of globalization is thus closely linked to the adoption of new technologies. This process is non-linear and affects countries differently. Essentially, the ability to retain a place in the global economy is directly linked to the ability of a country to generate, utilize and diffuse scientific and technological knowledge. The classical view that developing countries retain their role as exporters of raw materials has fallen apart, and only those countries that can add value to their natural resources have a place in the global economy. An alternative view, which is gaining in currency, calls for greater investment in human resource development, especially in technical skills. It pays particular attention to the role of science, technology and innovation in economic growth in general and the renewal of rural areas in particular.

This paper stresses that economic systems evolve over time through changes in knowledge and institutions. Economic transformation is a learning process that involves the use of new knowledge in productive activities and the complementary adjustment of social institutions. In this learning process, governments play important roles as facilitators of the generation, use, and diffusion of knowledge in the economic system. In conjunction with other sectors of society, governments also play a key role in building up the requisite scientific and technical skills in the population. Enterprises (private or public), however, are the mechanisms through which scientific and technological knowledge is transformed into goods and services, leading to economic transformation.

[1]. This paper is based on, *Science, Technology and Innovation: Challenges and Opportunities for Implementing the Millennium Development Goals*, the Interim Report of the Task Force on Science, Technology and Innovation of the Millennium Development Project commissioned by the United Nations Secretary-General.